

ABSTRACT OF THE DISCLOSURE

An impedance matching network and network assembly employ one or more variable inductive elements, wherein one or more of the variable inductive elements includes a high temperature ferrite core, a helical coil, and a means for physically translating the magnetic core through the helical coil. An impedance matching network may alternatively or additionally employ one or more variable inductive elements, wherein one or more of the variable inductive elements is cooled using a fan assembly. Further, the impedance matching network and network assembly may alternatively or additionally employ one or more variable inductive elements, wherein the cooling of one or more of the variable inductive elements is facilitated by increasing the surface area of the variable inductive element core.